

### AMENDMENTS TO THE CLAIMS

#### Listing of claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-11 (canceled)

Claim 12 (currently amended): A bioreactor arrangement comprising:

an axially elongated housing ~~having comprising:~~

a top housing section having one or more diameters;

a middle neck portion having a funnel-like shape;

a mid-housing section extending below the top housing section and having a rectangular cross section, wherein the mid-housing section is attached to the top housing section via the middle neck portion;

a lower neck portion having a funnel-like shape;

a cylindrical lower housing section extending below the mid-housing section and attached to the mid-housing section via the lower neck portion, the cylindrical lower housing having a third diameter smaller than the one or more diameters, the cylindrical lower housing closed at a bottom end forming a testing chamber, the cylindrical lower housing having glass beads therein; and

~~a length to width ratio of about 10:1 to about 5:1;~~

one or more slides for holding biofilm growth positioned within the mid-housing section elongated housing; and

~~a rectangular holder removably positioned within the elongated housing for retaining said one or more slides.~~

Claim 13 (cancelled)

Claim 14 (currently amended): The bioreactor arrangement of claim ~~[[13]]~~ 16, wherein the rectangular holder comprises:

a bottom portion with a threaded opening, and the at least one actuator comprises a rod having a threaded end, wherein the threaded end of the rod is threadedly inserted into the threaded opening in the bottom portion of the rectangular holder; and

a second opening at the bottom portion through which fluids from the underlying cylindrical lower housing section flows.

Claim 15 (currently amended): The bioreactor arrangement of claim 14, further comprising:

- an aeration inlet port located at the testing chamber;
- a feed supply inlet port located at the testing chamber;
- a testing inlet port located at the testing chamber; and
- an outlet port located at the cylindrical upper housing portion.

Claim 16 (new): The bioreactor arrangement of claim 12, wherein the top housing section comprises:

- a cylindrical sealable top portion having a first diameter;

an upper neck portion having a funnel-like shape;

a cylindrical upper housing portion extending below the cylindrical sealable top portion and attached to the cylindrical sealable top portion via the upper neck portion, the cylindrical upper housing portion having a second diameter smaller than the first diameter; the bioreactor arrangement further comprising a rectangular holder removeably positioned within the mid-housing section of the elongated housing for retaining said one or more slides, the rectangular holder having outer walls that contact walls of the mid-housing section, the rectangular holder supported on the lower neck portion which prevents the holder from sliding down into the testing chamber.

Claim 17 (new): The bioreactor arrangement of claim 12, wherein the mid-housing section includes,

two oppositely positioned side walls,

a plurality of closely spaced guide rods running upwardly along each of the two oppositely positioned side walls, the spaced guide rods positioned above the lower neck portion, with adjacent guide rods along each of the two oppositely positioned side walls forming grooves through which the one or more slides may be slid, and wherein the grooves and the lower neck portion support the one or more slides in an upright position within the mid housing section.

Claim 18 (new): The bioreactor arrangement of claim 17, further comprising:

an aeration inlet port located at the testing chamber;

a feed supply inlet port located at the testing chamber;

a testing inlet port located at the testing chamber; and  
an outlet port located at the mid-housing section.

Claim 19 (new):      The bioreactor arrangement of claim 17, wherein each of the plurality of guide rods has a diameter of about 0.7mm and wherein the distance between the closely spaced guide rods is about 1.1mm.